

IN THE CLAIMS

This listing of claims replaces all prior listings:

1. (Currently Amended) A transmitting apparatus for transmitting a hierarchical structure of a directory for hierarchically managing locations of contents data, comprising:

a managing means unit for managing a hierarchical structure of a directory composed of a container entry and a leaf entry, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry being disposed in the immediately lower hierarchical level of a container entry, a leaf entry not containing information in the immediately lower hierarchical level thereof;

a detecting means unit for detecting a change of the hierarchical structure of the directory managed by said managing means unit and obtaining position information and identification information corresponding to the detected result, the position information representing the position of a container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory; and

a transmitting means unit for transmitting the position information and the identification information

wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.

2. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said detecting means unit obtains difference information representing a change of the leaf entries corresponding to the detected result of a change of the hierarchical structure of the directory, 5 and wherein said transmitting means unit transmits the difference information along with the identification information.

3. (Currently Amended) A transmitting method for transmitting a hierarchical structure of a directory for hierarchically managing locations of contents data, comprising the steps of:

(a) managing a hierarchical structure of a directory composed of a container entry and a leaf entry, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry being disposed in the immediately lower hierarchical level of a container entry, a leaf entry not containing information in the immediately lower hierarchical level thereof;

(b) detecting a change of the hierarchical structure of the directory managed at step (a) and obtaining position information and identification information corresponding to the detected result, the position information representing the position of a container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory; and

(c) transmitting the position information and the identification information,
wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.

4. (Currently Amended) A receiving apparatus for receiving a hierarchical structure of a directory for hierarchically managing the locations of contents data that are transmitted, comprising:

a receiving means unit for receiving position information and identification information, the position information being obtained by detecting a change of container entries, the position information representing the position of a container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory, the directory being composed of

container entries and leaf entries, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry not containing information in the immediately lower hierarchical level thereof;

an obtaining means unit for selectively obtaining the identification information of a leaf entry in the immediately lower hierarchical level of a container entry represented by the position information corresponding to selection information designated corresponding to the position information; and

a managing means unit for managing the hierarchical structure of the directory formed with the position information corresponding to the selection information and with the identification information that is selectively obtained,

wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.

5. (Currently Amended) A receiving method for receiving a hierarchical structure of a directory for hierarchically managing the locations of contents data that are transmitted, comprising the steps of:

(a) receiving position information and identification information, the position information being obtained by detecting a change of container entries, the position information representing the position of a container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory, the directory being composed of container entries and leaf entries, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry not containing information in the immediately lower hierarchical level thereof;

(b) selectively obtaining the identification information of a leaf entry in the immediately lower hierarchical level of a container entry represented by the position information corresponding to selection information designated corresponding to the position information; and

(c) managing the hierarchical structure of the directory formed with the position information corresponding to the selection information and with the identification information that is selectively obtained,

wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.

6. (Currently Amended) A transmitting and receiving system for transmitting a hierarchical structure of a directory for hierarchically managing locations of contents data and receiving the transmitted hierarchical structure, comprising:

a first managing means unit for managing a hierarchical structure of a directory composed of a container entry and a leaf entry, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry being disposed in the immediately lower hierarchical level of a container entry, a leaf entry not containing information in the immediately lower hierarchical level thereof;

a detecting means unit for detecting a change of the hierarchical structure of the directory managed by said first managing means unit and obtaining position information, identification information, and difference information corresponding to the detected result, the position information representing the position of a container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory, the difference information representing the difference of leaf entries;

a transmitting means unit for transmitting the position information, the identification information, and the difference information;

a receiving means unit for receiving the position information, the identification information, and the difference information transmitted by said transmitting means unit;
obtaining means unit for selectively obtaining the identification information of a leaf entry in the immediately lower hierarchical level of a container entry represented by the position information corresponding to selection information designated corresponding to the position information; and

a second managing means unit for managing the hierarchical structure of the directory formed with the position information corresponding to the selection information and with the identification information that is selectively obtained,

wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.

7. (Currently Amended) A transmitting and receiving method for transmitting a hierarchical structure of a directory for hierarchically managing locations of contents data and receiving the transmitted hierarchical structure, comprising the steps of:

(a) managing a hierarchical structure of a directory composed of a container entry and a leaf entry, a container entry containing information in the immediately lower hierarchical level thereof, a leaf entry being disposed in the immediately lower hierarchical level of a container entry, a leaf entry not containing information in the immediately lower hierarchical level thereof;

(b) detecting a change of the hierarchical structure of the directory managed at step (a) and obtaining position information, identification information, and difference information corresponding to the detected result, the position information representing the position of a

container entry in the hierarchical structure of the directory, the identification information identifying a leaf entry corresponding to the hierarchical structure of the directory, the difference information representing the difference of leaf entries;

(c) transmitting the position information, the identification information, and the difference information;

(d) receiving the position information, the identification information, and the difference information transmitted at step (c);

(e) selectively obtaining the identification information of a leaf entry in the immediately lower hierarchical level of a container entry represented by the position information corresponding to selection information designated corresponding to the position information; and

(f) managing the hierarchical structure of the directory formed with the position information corresponding to the selection information and with the identification information that is selectively obtained,

wherein,

the position information includes a schema version, the schema version being a value that changes correspondingly to a change to the hierarchical structure of the directory.